

ATTACHMENT B

10/588126

In the CLAIMS:

Claims 1-53 (canceled)

54. (new) A method for preservation of a biological material, comprising:
- (a) adding a preservation solution to said biological material, said preservation solution comprising one or more polyphenols;
  - (b) cooling the biological material; and
  - (c) storing the biological material at appropriate storing conditions.
55. (new) The method of claim 54, wherein the polyphenols comprise one or more catechins.
56. (new) The method of claim 55, wherein the catechin is epigallocatechin gallate (EGCG).
57. (new) The method of claim 54, wherein the polyphenols are derived from green tea extract (GTE).
58. (new) The method of claim 54, wherein the preservation solution does not comprise a significant amount of glycerol.
59. (new) The method of any of claim 54, wherein the preservation solution does not comprise a significant amount of DMSO.
60. (new) The method of claim 54, wherein the preservation solution comprises a macromolecule.
61. (new) The method of claim 54, wherein the macromolecule is dextran.
62. (new) The method of claim 54, wherein the preservation solution comprises trehalose.
63. (new) The method of claim 54, wherein the preservation is cryopreservation, the preservation solution is a cryopreservation solution, and the cooling of step (b) is to a temperature below 0°C.
64. (new) The method of claim 63, wherein the cryopreservation is freezing and the cryopreservation solution is a freezing solution, and the cryopreservation of step (c) is by freezing.

65. (new) The method of claim 63, wherein the cryopreservation is lyophilization, the cryopreservation solution is a lyophilization solution, and the cryopreservation of step (c) is by lyophilization.
66. (new) The method of claim 54, wherein the biological material comprises cells selected from the group consisting of red blood cells (RBC), white blood cells (WBC), mononuclear cells (MNC), umbilical cord blood cells (UCB), hematopoietic stem cells (HSC), and bacteria.
67. (new) The method of claim 66, wherein the biological material comprises RBC and the biological material is frozen such that after thawing in appropriate thawing conditions the biological material comprises free hemoglobin levels below 10 percent.
68. (new) The method of claim 67, wherein the polyphenols comprise the catechin epigallocatechin gallate (EGCG) and the preservation solution does not comprise a significant amount of glycerol or DMSO.
69. (new) The method of claim 67, comprising:
- (d) thawing said biological material in appropriate thawing conditions such that after thawing the biological material comprises RBC suspended in a liquid; and
  - (e) separating said RBC from said liquid.
70. (new) The method of claim 68, which does not comprise a step of washing the biological material.
71. (new) The method of claim 69, wherein step (e) comprises:
- (e') centrifuging the biological material such that the majority of RBC are in a pellet and the majority of the liquid is in a supernatant; and
  - (e'') removing the supernatant.
72. (new) The method of claim 71, wherein after step (e'') the free hemoglobin levels in the pellet are below 2 percent.
73. (new) A biological material preserved by the method of claim 54.

74. (new) The biological material of claim 73, wherein the polyphenols comprise one or more catechins.
75. (new) The biological material of claim 74, wherein the catechin is epigallocatechin gallate (EGCG).
76. (new) The biological material of claim 73, wherein the biological material does not comprise a significant amount of glycerol.
77. (new) The biological material of claim 73, wherein the biological material does not comprise a significant amount of DMSO.
78. (new) The biological material of claim 73, having less than 10% H<sub>2</sub>O as compared with its H<sub>2</sub>O content before preservation.
79. (new) A frozen viable biological material comprising RBC and characterized in that after thawing in appropriate thawing conditions the biological material comprises free hemoglobin levels of below 2 percent.
80. (new) The frozen biological material of claim 79, having essentially no glycerol.
81. (new) The frozen biological material of claim 79, having essentially no DMSO.
82. (new) A method of preparing a preservation solution for preserving a biological material comprising mixing one or more polyphenols with a physiologically acceptable carrier.
83. (new) The method of claim 82, wherein the polyphenols comprise one or more catechins.
84. (new) The method of claim 83, wherein the catechin is epigallocatechin gallate (EGCG).
85. (new) The method of claim 81, wherein the polyphenols are derived from GTE.
86. (new) A method for the preservation of a biological material comprising RBC comprising:
- (a) freezing the biological material in appropriate freezing conditions;
  - and

- (b) storing the biological material at appropriate storing conditions;  
said method characterized in that after thawing in appropriate thawing conditions the biological material comprises free hemoglobin levels of below 10 percent.
- 87. (new) The method of claim 86, wherein the appropriate freezing conditions include addition of a freezing solution.
- 88. (new) The method of claim 86, wherein said freezing solution comprises one or more polyphenols.
- 89. (new) The method of claim 86, the method further comprising:
  - (c) thawing said biological material in appropriate thawing conditions such that after thawing the biological material comprises RBC suspended in a liquid; and
  - (d) separating said RBC from said liquid.
- 90. (new) The method of claim 89, wherein step (d) comprises:
  - (d') centrifuging the biological material such that the majority of RBC are in a pellet and the majority of the liquid is in a supernatant; and
  - (d'') removing the supernatant.
- 91. (new) The method of claim 90, wherein said free hemoglobin levels are below 2 percent.
- 92. (new) A method for preservation of a biological material, comprising:
  - (a) adding a preservation solution essentially free from any polyalcohol, to said biological material;
  - (b) cooling the biological material; and
  - (c) storing the biological material at appropriate storing conditions.
- 93. (new) A preserved viable biological material, having a volume exceeding 1 ml, preserved for a period exceeding 40 days.